



## PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of  
LeRoy G. Hagenbuch

Serial No. 717,042

Filed: April 1, 1985

For: Apparatus and Method  
Responsive to the  
On-Board Measuring of  
the Load Carried by  
a Truck Body

Group Art Unit: 236

## INFORMATION DISCLOSURE STATEMENT

Hon. Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

Dear Sir:

In accordance with 37 C.F.R. §1.97, the Examiner's attention is drawn to the patents and other literature listed on the attached PTO Form 1449 which are described briefly hereinafter. For the Examiner's convenience, a copy of each of the references listed on the attached PTO Form 1449 is enclosed.

An Information Disclosure Statement has previously been filed in the co-pending parent application of this application, U.S. Serial No. 604,739, and the substance of that statement is incorporated by reference in this statement. Copies of the statement in the '739 application and the Form 1449 attached thereto are enclosed herewith for the Examiner's convenience.

The following is a brief statement of the relevance of each reference listed on the attached Form 1449.

Reference AA is a one page ad for a material handling device or storage system identified by the trademark name Load Bank, manufactured by Conveyor Logic Inc. In an illustration included in the ad, a flexible hose appears to

provide a cushioned support for a series of rollers housed in a channel for providing a bearing surface for storage pallets. Applicant is only aware of the "Load Bank" storage system to the extent that it is disclosed in the enclosed ad and, based on the ad, believes the illustration shows only a hose for cushioning the roller assemblies.

Reference AB is a brochure which discloses the use of ordinary vehicle tires as means for weighing large masses at remote locations. The use of ordinary tires in connection with a pressure plate is disclosed in various environments, but none of those environments include or suggest a weighing device on board a vehicle.

Reference AC is an article entitled "Computer Monitors and Controls All Truck-Shovel Operations" which appeared in the March 1985 issue of Coal Age magazine. Although this article appears in the March, 1985 issue of Coal Age and, therefore, is not prior art to applicant under Section 102. The article is included in this statement in the interest of full disclosure. The article describes a computer dispatching system for hauling trucks to be installed at an open-pit mine in Canada by a company named Modular Mining Systems, Inc. In the disclosed system, a central computer cooperates with a dispatcher to give instructions to the operator of the hauling trucks in order to maximize the efficiency of the trucks by optimizing the truck routes. In order to keep track of the location for each truck, beacons are located at various locations in the mine in order that signals transmitted from the trucks may be received by a particular beacon and thereby indicate to the central computer the physical location of the truck.

Unlike applicant's dispatch system, the system disclosed in the foregoing article from Coal Age magazine requires each truck driver to manually enter information into an on-board computer when the truck arrives at a location, begins to load and dumps the load. Because of the on-board weighing device disclosed and claimed by applicant,

the claimed invention does not rely upon the truck operator for full integrity of the system. In other words, the system described in Coal Age magazine only works if each truck driver remembers to enter all the appropriate data. In contrast, applicant's invention, because of the on-board weighing device, does not have any need for an input from each truck operator in order for the system to function properly.

Reference AD are two fliers for an electronic device which is mounted on board a vehicle for monitoring certain parameters of the vehicles such as total hours in service. By maintaining a record of the total hours in service, the vehicle owner can accurately determine when periodic maintenance is required.

Reference AE is a flier from Kent Manufacturing of Seattle, Washington. The flier discloses a cushioning member which installs to the underside of a truck body for allowing a cushioned interface between the body and frame of the truck. This cushioned interface is merely vulcanized rubber and in no way is capable of providing a weight measurement nor does it suggest any kind of mechanism which would weigh the truck body.

Reference AF is pamphlet YM 18-103 NA distributed by the Bureau of Mines at its "Technology Transfer Seminar on Safety in the Operation and Maintenance of Large Surface Mining Equipment" during August of 1983. The pamphlet includes a brochure for Wylie "Safe Load Indicator Systems". The system uses the hydraulic supports for the truck body as a means to provide an indication of weight. Specifically, load sensors accurately monitor pressure in the hydraulic cylinders and thereby provide an indication of the weight of the truck body. In this system, the truck body must be lifted off of the frame by the hydraulic cylinders for a weight reading to be obtained. Several other systems are also disclosed in the pamphlet.

Reference AG is a brochure entitled "The VMS - Setting New Standards for Vehicle Monitoring" which describes a vehicle monitoring system for reducing maintenance and operating costs manufactured by GLI Corporation. This system provides for the on-board monitoring of various operational parameters of a heavy duty, off-road truck. The system does not provide for the weighing of the load carried by the truck body, nor does it provide for the control of vehicle dispatching in response to changes in its load. In the GLI system, certain vehicle parameters such as engine oil level are recorded by an on-board device and downloaded to a dedicated computer by way of a RF link.

Reference AH is a technical paper entitled "Real Time Data Retrieval System is Key to Diagnostics". It was delivered at the International Congress and Exposition held in Detroit, Michigan by the Society of Automotive Engineers on February 27 - March 2, 1984. In substance, this paper describes the vehicle monitoring system by GLI Corporation discussed in connection with Reference AG.

Reference AI is an article from the magazine "Diesel Progress" and is a discussion of the GLI System discussed in References AG and AH.

Reference AJ is U.S. Patent No. 4,178,015 to Merriman et al. entitled "Inflated Vehicle Spring and Lift".

Reference AK is a brochure for the "Merriman Windjammer" which is an air or hydromechanical actuator.

References AL to AP disclose systems for weighing the loads carried by vehicles. They are similar to the types of systems disclosed in the Information Disclosure Statement (IDS) submitted in the co-pending U.S. patent application Serial No. 604,739 of which this application is a continuation-in-part. Since references AL to AP are similar to the references in the IDS for the '739 application and since applicant is enclosing with this statement a copy of the IDS from the '739 application, there is no need to deal with references AL to AP individually or in detail.

Signed in Chicago, in the County of Cook, State of Illinois this 29 day of January, 1986.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231 on January 29, 1986.

By John B. Conklin